

PERSPECTIVES

When Is Medical Treatment Futile?

A Guide for Students, Residents, and Physicians

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A difficult ethical conundrum in clinical medicine is determining when to withdraw or withhold treatments deemed medically futile. These decisions are particularly complex when physicians have less experience with these discussions, when families and providers disagree about benefits from treatment, and when cultural disparities are involved in misunderstandings. This paper elucidates the concept of "medical futility," demonstrates the application of futility to practical patient care decisions, and suggests means for physicians to negotiate transitions from aggressive treatment to comfort care with patients and their families. Ultimately, respect of persons and beneficent approaches can lead to ethically and morally viable solutions.

KEY WORDS: medical futility; medical education; end-of-life care; doctor-patient communication; medical ethics.

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Mrs. F. is an 80-year-old woman, with nonresectable lung cancer, diabetes, hypertension, chronic renal insufficiency, and severe degenerative joint disease. She was stable, walking short distances with a walker, fully cognizant, and living in a retirement center until 2 days prior to admission when she became markedly short of breath. She was diagnosed with lobar pneumonia. Mrs. F. has three children and eight grandchildren. She had not written a living will and is very religious, wishing to leave her fate to higher beings.

Despite initial improvement with treatment, Mrs. F. developed high fevers and septicemia on her third day of hospitalization. Stronger antibiotics, vasopressors, and fluids did not prevent worsening hypoxemia. She developed acute renal failure and became mentally obtunded despite aggressive treatment. Her family has asked that "everything be done." Physicians realized Mrs. F. needed dialysis and intubation to prevent imminent death. Given her incurable lung cancer, it was unlikely that Mrs. F. would ever be

extubated. Under the best circumstances, she would not return to semi-independent living and would face continued pain and further decline from her cancer. The family still requested full treatment. The residents were frustrated, believing further aggressive treatments were futile.

Mrs. F. is a composite patient derived from multiple real patients, yet this scenario represents a common occurrence in clinical medicine. Physicians frequently help families decide when to stop aggressive treatment in favor of supportive care. This juncture is particularly taxing for physicians-in-training. As a physician serving on our hospital ethics consult service, I find over 80% of our requests concern conflicting opinions between health care providers and patients' family members about when to transition to comfort care. This paper offers practical insights for students, residents, and physicians in early practice regarding management of this difficult juncture in clinical medicine. I use the term *medical futility* to stay in accordance with current literature, recognizing that the term *clinical futility* is more apropos for this piece. I will explore futility as a concept applied directly to patient care and how physicians negotiate transitional decisions when family members and providers have disparate opinions.

Medical Futility: Definitions and Controversies

Futility in medicine is an ancient concept. Hippocrates clearly stated that physicians should "refuse to treat those who are overmastered by their disease, realizing that in such cases medicine is powerless."¹ Webster's dictionary defines *futile* as "serving no useful purpose, completely ineffective."² The word *futile* refers to a specific action, whereas *futility* is the relationship between an action and a desired goal. In the rest of the paper, *medical futility* is defined as a clinical action serving no useful purpose in attaining a specified goal for a given patient.

In medicine, the goals of treatment must be explicitly defined. In the case above, the actions—intubation and dialysis—effectively deliver oxygen to, and filter blood. Nonetheless, neither action can effectively return Mrs. F. to her prior state of health. Mrs. F.'s family may believe that intubation and dialysis will not only keep her alive but also give her a chance to recover. Physicians alternatively recognize that Mrs. F. is dying from her cancer and believe further aggressive treatments are inhumane, because death

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will still imminently occur. If the goal of aggressive treatment is to prevent bodily death, dialysis and intubation are not futile as they can achieve this goal. On the other hand, if the intention of aggressive treatment is to return Mrs. F. to independent living, or prevent her imminent death, dialysis and intubation serve no useful purpose and are futile. Intubation and dialysis might even be considered maleficent or harmful if the goal of treatment is to allow Mrs. F. a more peaceful and dignified death. The residents cannot determine medical futility concerning Mrs. F.'s care without succinctly stating goals for treatment.

Scholar Griffin Trotter delineates a clear definition of medical futility³ that corresponds with concepts stated by the American Medical Association's Council on Ethical and Judicial Affairs⁴ and the Society of Critical Care Medicine's ethics committee.⁵ Trotter clarifies that medical futility occurs when:

- 1) There is a goal,
- 2) There is an action and activity aimed at achieving this goal, and
- 3) There is virtual certainty that the action will fail in achieving this goal.

Unfortunately, this definition does not provide clear answers for all clinical questions. How can one obtain "virtual certainty" that an action will fail in achieving its goal? There are always exceptions. There is a minuscule, albeit unlikely chance, that Mrs. F. could survive septicemia, be extubated, placed in a nursing home, and communicate with her family before succumbing to cancer.

Some scholars tried to quantify medical futility, defining it as less than a 1% chance of success.⁶ Others set different thresholds, such as less than 2% or 5% success rates.⁷ Although attractive for its concreteness, quantitative methods are unsatisfactory for the small percentage of patients who benefit from treatment.⁸ Other ethicists propose medical futility should be determined qualitatively according to specific values. If the important quality is *physiologic futility*, then no physiologic benefit results from proposed treatment. If *benefit-centered futility* is preferred, then treatments will not benefit the patient.⁹ If *operationalizing futility* is valued, then costs of treatment exceed measurable benefits.^{4,10} This is also called *utility*,¹¹ and demands enunciating one's goals relative to cost-benefit ratios.

To complicate matters further, some ethicists claim medical futility is an ancient concept and inadequate for modern ethical deliberations.⁷ In Hippocrates's time, medical knowledge was limited and disease processes frequently overpowered patients. Modern medical knowledge and progressive technologies have dramatically altered our ability to sustain life. Discerning when medical interventions merely prolong dying is a distinctly modern challenge. Opponents of using medical futility for ethical arguments worry that physicians have a trump card to overpower families with less knowledge, thereby delivering paternalistic care.⁵ Some also argue medical futility is a smoke-screen

to hide rationing of resources and costs for end-of-life care.⁴ These scholars state futility should never be evoked in medical decision making and prefer using *standards of care* combined with the *best interest* of the patient to solve end-of-life dilemmas.¹²

Can Futility Be Applied to End-of-life Decisions?

The prior conversation illuminates many difficulties in declaring treatments futile. In order for futility to be useful in clinical decisions, various involved parties need to negotiate and agree upon specific goals for treatment. This is not always possible, but with compassion and expertise it is frequently achieved. In a recent didactic, case-based discussion, I was asked to answer five questions residents struggle with concerning withdrawing aggressive treatment in patients similar to Mrs. F. I share these questions and answers to help physicians navigate their way through difficult discussions with patients and families about futility at the end of life.

Question 1: What are the implications for using medical "futility" in decisions to withdraw aggressive treatments?

Three concepts are central for physicians in discussing futility with patients and families. First, *physicians are not obligated to provide treatments they believe are ineffective or harmful to patients*. Physicians have a fiduciary obligation, and have taken a professional oath, to "first do no harm." If harms of treatment are excessive, physicians risk maleficence. Physicians must exercise clinical judgment when declaring treatments futile. They need to clarify between specific treatments that are medically ineffective, yet might still provide perceived benefits to patients. For example, intubation and dialysis are medically ineffective in returning Mrs. F. to her former state of health. Yet, these treatments can provide a benefit if her family wishes to keep Mrs. F. alive until family members traveling great distances arrive to say goodbye to her. Before physicians declare a given action futile they must deliberatively weigh medical effectiveness with benefits and harms perceived by both medical professionals and patients or their families.¹³

Second, *physicians should not initially just say "no" to patients concerning futile treatments, but must engage in dialog and discuss alternatives*. When physicians believe specific treatments are futile, they are still obligated to mention this treatment. Patients and their families have the right to be fully informed and deserve frank explanations why a specific treatment is not beneficial.⁹ As a matter of fact, this provides physicians with an opportunity to clarify goals of treatment and frames future discussions. Patients requesting nontraditional treatments should also be respectfully guided through discussions leading to reasonable and nonharmful medical practice.

Third, *physicians must always convey that medical CARE is NEVER futile*. Physicians should distinguish between aggressive treatments and those which provide comfort care. The patient must be guaranteed palliation,

pain control, respect of her dignity, and reassurance that the medical team will never abandon her care even when specific treatments are deemed futile.¹⁴

Question 2: What can physicians do when their professional judgment differs from preferred patient or family choices?

First, it is important to determine who has the moral and legal right to make medical decisions. The patient has the right to make decisions regarding his own care as long as he is mentally competent. If a patient is deemed mentally incompetent to make decisions, a surrogate must be identified. This surrogate can be legally assigned by the patient prior to incapacity (a durable power of attorney), or his next of kin. If there is not an identifiable surrogate by either means, the courts must assign a morally valid proxy who can act in the patient's best interest.

When there are disparate views, physicians should engage in active dialog with the patient or designated proxy concerning which treatments are in the patient's best interest. Physicians should clarify values most important to the patient and then respectfully elucidate all treatment options. Physicians must exercise judicious use of power when withholding or withdrawing treatments deemed harmful. All decision makers (physicians and surrogates) are asked to heed beneficence by supporting the patient's values when he cannot speak for himself.

Question 3: When does professional judgment allow physicians to dictate the care of the patient?

This question arose from physicians who felt forced to provide all treatments requested by patients. At times, physicians perceive themselves as mere technicians within a powerful system. Nonetheless, it is never appropriate to *dictate* medical treatments. Even when certain treatments are denied because of undue risk of harm, respectful discussions are always necessary. Viable choices must be offered within the realm of good patient care.

Physicians should also not dictate nuances of care for her patient, with one exception. If a physician believes harm is being inflicted by a patient's surrogate, the physician can request the courts to replace the patient's designated surrogate with a more valid moral proxy. This action is extreme and requires the physician to first identify the moral frame of reference guiding her convictions, and then reflect upon subjective differences between her moral convictions and the patient's. By identifying disparate ideologies, the physician can more effectively clarify options supporting the patient's interests and values.¹⁵

These discussions can be uncomfortable, especially if physicians and patients are from different cultures. The effort to respect patient values, as well as one's fiduciary commitments, requires humility,¹⁶ integrity,¹⁷ patience, and finesse in order to avoid tragedies of miscommunication.¹⁸ Negotiations are smoother when physicians avoid hierarchical and distancing mannerisms, joining with the family in care decisions.^{19,20}

Question 4: If treatment is deemed medically futile by physicians, but the family wants "everything done," what is the next step?

This situation is very difficult. It is important to explain futility to families. If practitioners feel there is essentially no chance of meaningful recovery, this needs to be stated explicitly to the family. Families always hope their loved one will improve. If practitioners know that at best, the status quo will be maintained until further decline naturally ensues, physicians need to empathically yet succinctly state this, and then allow families' time to process this information before steadfastly recommending withdrawal or withholding aggressive treatments. In the case of Mrs. F., physicians can tell her family that she cannot recover from her lung cancer. She will die soon regardless of interventions. If she were intubated and dialyzed, she may never be extubated and would likely remain fully obtunded. If her heart stops, CPR might break her ribs, or inflict pain. In the physician's view, aggressive treatment is considered harmful and ineffective. Physicians should exercise their expertise in prognostication²¹ and help families match interventions with their true intentions. Most families do not care to see their loved ones suffer, and are relieved when physicians offer guidance about withdrawing aggressive treatments from their loved one.¹⁹ When physicians redefine "doing everything" into actions which prevent prolonged suffering, they help support families through their painful experiences.

The physician who unveils a family's values, clarifies medical standards of care, explicates effectiveness from benefits versus harms, and respectfully explains alternative care plans is more likely to find common ground with patients. If after these approaches are used negotiations still result in a stalemate, other providers and/or ethics committees should be consulted, and ultimately a transfer of care to another provider or facility may be necessary. It is important that physicians are not forced into practicing medicine which conflicts with their moral or fiduciary responsibilities.

Question 5: If the patient suffers a cardio-respiratory arrest before a decision is reached with the family, can a code be stopped based on medical futility or does the "FULL CODE" designation have priority?

If code status has been duly explained and the family still wants full code, anything less than a true resuscitative effort is deceptive and can be labeled paternalism. On the other hand, physicians must run and stop actual codes based upon their own professional knowledge. To run a slow code or partial code if the full code has a chance of success is inappropriate. But, if the physician assesses further resuscitative efforts will be unsuccessful, or lead to greater harm to the patient, the physician must exercise judgment and state CPR is not indicated, or stop the code after a valid attempt. At the exact moment of a patient's cardiac arrest, the physician must utilize her best judgment whether or not CPR is medically indicated.

Physicians are obligated by their fiduciary responsibilities to inform family members when CPR is considered futile, and hence, cannot be performed in good conscience. The patient or her surrogate must grant permission to write

orders for Do Not Resuscitate or cessation of aggressive treatments. When these orders are not written, the physician assumes moral complicity in continuing aggressive treatments. A common error today is for physicians to leave this difficult choice to patients alone, without ever succinctly expressing their professional opinion that further aggressive treatment is medically harmful and hence, not indicated.

Summary

Modern medicine has made it feasible to support human life for an indeterminate period. This has led to difficult legal and moral discussions concerning medical futility and transitions from aggressive treatment to comfort care. This article has illuminated that medical futility must always be directed toward a discreet clinical outcome. Providing ongoing care for patients is never futile. Negotiating care when either the physician or family believes treatments are futile is a delicate process built upon respect of both patient and professional values. Discrepancies between these values require physicians to exercise humility and professional integrity. In the end, respect of persons and beneficent approaches can lead to ethically and morally viable solutions.

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